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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,756	07/24/2007	Murray Edward Bruce Leighton	769-399	3380

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EXAMINER	
GOFF II, JOHN L	

ART UNIT	PAPER NUMBER
1746	

MAIL DATE	DELIVERY MODE
08/05/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,756	LEIGHTON, MURRAY EDWARD BRUCE	
	Examiner	Art Unit	
	JOHN GOFF	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,9 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,9 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on 5/10/11.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (U.S. Patent 3,388,021).

Johnson discloses an apparatus comprising supports (22, 23), support clamping means (not shown), and a probe (24) movable between a first position which in use it is clear of engaged profile lengths and a second position in which it has penetrated into the material of the end portion of the profile lengths (Figures 1, 8, and 14 and Column 4, lines 4-64).

As to the "means for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The supports (22, 23) are capable of performing the identical function of the claimed means, i.e. receiving a pair of zipper profile lengths in engagement with each other over at least an end portion at which the profiles are to be joined, such that the supports are considered an equivalent means. It is further noted a single support (22 or 23) is also an equivalent means.

As to the probe "movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the

end portions, wherein the probe is movable between its first and second positions in a direction substantially longitudinally of the profiles", the probe taught by Johnson is movable between first and second positions including a first portion in which, in use, it is clear of engaged profile lengths and a second position in which it has penetrated into material of the end portions, wherein the probe is movable between the first and second positions in a direction substantially longitudinally of the profiles.

As to the "means for heating the probe" and claim 9, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. Johnson teaches a heating element (79) comprising an electrical heating element in a non-front considered rear portion of the probe which element is capable of performing the identical function of the claimed means, i.e. heating the probe, such that the element is considered an equivalent means.

As for the "means for applying external pressure to the zipper profile end portions when the probe is in its first position", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The support clamping means is capable of performing the identical function of the claimed means, i.e. applying external pressure to the zipper profile end portions when the probe is in its first position, such that the support clamping means are considered an equivalent means. It is further noted the other single support (22 or 23) not used as the means for receiving is also an equivalent means for applying external pressure.

Regarding the limitation of "for joining the ends of a pair of zipper profiles", "for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined", "which is movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has

penetrated into the material of the end portions, wherein the probe is movable between its first and second positions in a direction substantially longitudinally of the profiles", "for heating the probe", and "for applying external pressure to the zipper profile end portions when the probe is in its first position", these limitations are directed to either the material worked upon or the intended use of the apparatus. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." (MPEP 2115). The apparatus taught by Johnson is capable of working upon the materials claimed, i.e. a pair of zipper profiles. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught by Johnson includes all of the claimed structure of the claims, i.e. means for receiving, probe, means for heating, and means for applying, which structure is capable of the claimed intended use.

4. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Barradas (U.S. Patent 2,715,087).

Barradas discloses an apparatus comprising a receptacle (11), a clamp (15, 16), and a movable heated probe (14) (Figures 1-5 and Column 1, lines 15-39 and Column 2, lines 3-55 and Column 4, lines 5-10).

As to the "means for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The receptacle (11) is capable of performing the identical function of the claimed means, i.e.

receiving a pair of zipper profile lengths in engagement with each other over at least an end portion at which the profiles are to be joined, such that the receptacle is considered an equivalent means.

As to the probe "movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the end portions, wherein the probe is movable between its first and second positions in a direction substantially longitudinally of the profiles", the probe taught by Barradas is movable between first and second positions including a first portion in which, in use, it is clear of engaged profile lengths and a second position in which it has penetrated into material of the end portions, wherein the probe is movable between the first and second positions in a direction substantially longitudinally of the profiles.

As to the "means for heating the probe", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. Barradas necessarily teaches an unillustrated heating element for heating the front portion of the probe which element is capable of performing the identical function of the claimed means, i.e. heating the probe, such that the element is considered an equivalent means.

As to the "means for applying external pressure to the zipper profile end portions when the probe is in its first position", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The clamp (15, 16) is capable of performing the identical function of the claimed means, i.e. applying external pressure to the zipper profile end portions when the probe is in its first position clear of engaged profile lengths such that the clamp is considered an equivalent means.

Regarding the limitation of "for joining the ends of a pair of zipper profiles", "for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined", "which is movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the end portions, wherein the probe is movable between its first and second positions in a direction substantially longitudinally of the profiles", "for heating the probe", and "for applying external pressure to the zipper profile end portions when the probe is in its first position", these limitations are directed to either the material worked upon or the intended use of the apparatus. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." (MPEP 2115). The apparatus taught by Barradas is capable of working upon the materials claimed, i.e. a pair of zipper profiles. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught by Barradas includes all of the claimed structure of the claims, i.e. means for receiving, probe, means for heating, and means for applying, which structure is capable of the claimed intended use.

Claim Rejections - 35 USC § 103

5. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki (JP 55045379) in view of Barradas.

Inagaki discloses an apparatus for heat sealing both ends of a plastic tube containing a baked cake comprising a receiving means (not illustrated but necessarily receiving/supporting the plastic tube in Figure 3), and movable heat seal bars (5) at opposite ends of the receiving means (Figures and abstract). Inagaki does not teach the use of a heated probe. However, it was known in the art to use a heated probe in place of the heating means in the seal bars to apply heat for sealing to the inside of the tube as opposed to the outside of the tube to make a perfect seal with the least amount of decomposition of the plastic material that is non-porous and will not transmit gases or vapors, in particular water vapor as evidenced by Barradas (more fully described above). It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the heating means for the seal bars in Inagaki and replace them with a heated probe as suggested by Barradas to seal the baked cake with a perfect seal.

As to the "means for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The receiving means (not illustrated but necessarily receiving/supporting the plastic tube in Figure 3) in Inagaki as modified by Barradas is capable of performing the identical function of the claimed means, i.e. receiving a pair of zipper profile lengths in engagement with each other over at least an end portion at which the profiles are to be joined, such that it is considered an equivalent means.

As to the probe "movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the end portions, wherein the probe is movable between its first and second positions in a direction

substantially longitudinally of the profiles", the probe taught by Inagaki as modified by Barradas is movable between first and second positions including a first portion in which, in use, it is clear of engaged profile lengths and a second position in which it has penetrated into material of the end portions, wherein the probe is movable between the first and second positions in a direction substantially longitudinally of the profiles.

As to the "means for heating the probe", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. Inagaki as modified by Barradas necessarily teaches an unillustrated heating element for heating the front portion of the probe which element is capable of performing the identical function of the claimed means, i.e. heating the probe, such that the element is considered an equivalent means.

As to the "means for applying external pressure to the zipper profile end portions when the probe is in its first position", this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The seal bars (5) in Inagaki as modified by Barradas are capable of performing the identical function of the claimed means, i.e. applying external pressure to the zipper profile end portions when the probe is in its first position clear of engaged profile lengths.

Regarding the limitation of "for joining the ends of a pair of zipper profiles", "for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined", "which is movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the end portions, wherein the probe is movable between its first and second positions in a direction substantially longitudinally of the profiles", "for heating the

probe", and "for applying external pressure to the zipper profile end portions when the probe is in its first position", these limitations are directed to either the material worked upon or the intended use of the apparatus. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." (MPEP 2115). The apparatus taught by Inagaki as modified by Barradas is capable of working upon the materials claimed, i.e. a pair of zipper profiles. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught by Inagaki as modified by Barradas includes all of the claimed structure of the claims, i.e. means for receiving, probe, means for heating, and means for applying, which structure is capable of the claimed intended use.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barradas as applied to claim 7 above or Inagaki and Barradas as applied to claims 7 and 10 above, and further in view of Johnson (U.S. Patent 3,388,021).

Barradas teaches the probe is heated with the front portion of the probe comprising a conductive metal. Barradas does not further describe the probe. It is conventionally known to heat a probe by including an electrical heating element (79) within a rear portion of the probe as evidenced by Johnson (Column 7, lines 70-74). It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the probe in Barradas or Inagaki as modified by Barradas using an electrical heating element within the rear portion of the probe

conventionally known in the same art as evidenced by Johnson only the expected result of heating the probe being achieved.

7. Claims 1-3, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Applicants specification pages 1-2) in view of Johnson.

The admitted prior art discloses it was known to join an end of a pair of plastic zipper profiles by bringing the zipper profiles into engagement with each other at least over an end portion at which the profiles are to be joined and applying external heat and external pressure to the end portion of the zipper (Specification page 1, line 3 to page 2, line 6). The admitted prior art does not teach applying the heat by introducing a heated probe. It was known in the art to join an end of a pair of plastic profiles (20, 21) by bringing the profiles into engagement with each other at least over an end portion at which the profiles are to be joined, applying external pressure (via supports 22 and 23 and support clamping means not shown) to the end portion, introducing a heated probe (24) into the engaged end portions of the profiles in order to form a recess in the profile material in the region of the probe, withdrawing the probe, and continuing to apply external pressure to the end portions of the profiles until the portions cool as shown by Johnson. Johnson teaches internally applying the heat via the heated probe reduces the heating duration required as compared to when the heat is externally applied (Column 1, lines 36-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the heat to the end portion of the zipper as taught by the admitted prior art using the heated probe as shown by Johnson to reduce the heating duration where because the end portion of the zipper is that which is joined it would have been further obvious that the zipper is arranged such that the probe is introduced into the profile end portions in a direction substantially

longitudinally of a length of the profiles as arranging the zipper in the only other alternative direction, i.e. where the probe is introduced into the profiles in a direction substantially transverse of a length of the profiles, would rest in completely joining the profiles along their length and destroying the functionality of the zipper.

Regarding claim 2, the external pressure applied until the portions cool is in the absence of external heat. Regarding claim 3, the sole external means of joining the profile end portions during the step of cooling is the pressure applied. Regarding claims 7 and 9, Johnson teaches the means claimed as more fully set forth above.

8. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Johnson as applied to claims 1-3, 7, and 9 above, and optionally further in view of Inagaki.

The admitted prior art and Johnson as applied above teach a method and apparatus for joining an end of a pair of plastic zipper profiles as claimed. The admitted prior art is silent to joining the other end either simultaneously or sequentially. It would have been obvious to one of ordinary skill in the art at the time the invention was made performing the admitted prior art as modified by Johnson to join the other end of the pair of plastic zipper profiles simultaneously with joining the first end as there are only two possibilities, i.e. simultaneously with joining the first end or subsequent to joining the first end, where simultaneously joining obviously requires a second apparatus but has the improvement of faster joining taking half the time it being further optionally known that the simultaneous sealing of both ends was well understood in the art as evidenced by Inagaki (fully described above). It is noted a second apparatus in the admitted prior art as modified Johnson and optionally Inagaki includes the probe, heating means, and

external pressure means near, i.e. at, an end of the receiving means of the first apparatus opposite the end of the receiving means near the first probe.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Johnson as applied to claims 1-3, 7, and 9 above, and further in view of Mojonnier et al. (U.S. Patent 3,600,248).

The admitted prior art and Johnson as applied above teach melting the plastic profiles to form the recess without a specific recitation of vaporizing the profile materials. It was known in the art of melting plastic profiles to join the profiles together using a heating element that contacts the profiles that the profile material is at least vaporized in the region of the element to prevent the plastic from sticking to the element as shown by Mojonnier (Column 3, lines 43-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made performing the method taught by the admitted prior art as modified by Johnson to heat the plastic profiles at least until they vaporize within the region of the heated probe to prevent the plastic profile material from sticking to the probe as suggested by Mojonnier.

Response to Arguments

10. Applicant's arguments with respect to claims 1-3, 5-7, 9, and 10 have been considered but are moot in view of the new ground(s) of rejection.

In view of applicants amendment and arguments thereto the previous 35 USC 112 rejections are withdrawn.

Applicant argues, "In other words merely heating the walls of a workpiece is fundamentally different from forming a recess in the workpiece. In the Barradas reference, no

recess is formed and the end of the tube is sealed together whereas the presently pending claims recite "applying external pressure to the end portion of the zipper" after formation of the recess." and "Moreover, the apparatus of the Barradas reference could not work on a zipper, even somehow assuming that a recess were created, the disclosed sealing bars of the Barradas reference would merely seal the ends of the zipper together, leaving the formed recess in place.".

Although claim 7 is not commensurate in scope with this argument because the apparatus claims do not require forming a recess in the zipper and removing the formed recess, it is noted the apparatus taught by Barradas includes all of the structure required by the claims capable of forming a recess in a workpiece such as a zipper to form ends of the workpiece separated by a recess and applying external pressure to the end portion of the workpiece including to move the ends of the workpiece together at the recess to remove the recess and form a joint as set forth above. Claim 7 is anticipated by Barradas. There is no evidence of record that the seal bars of Barradas would not remove the formed recess where all of the structure taught by Barradas is consistent and in agreement with that of removing the formed recess.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JOHN GOFF** whose telephone number is **(571)272-1216**. The examiner can normally be reached on M-F (7:30 AM - 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katarzyna Wyrozebski can be reached on (571) 272-1127. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHN GOFF/
Primary Examiner, Art Unit 1746